

Appeal No. 2000-2036  
Application 08/897,484

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 23

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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Ex parte CLARENCE W. MC QUEEN

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Appeal No. 2000-2036  
Application 08/897,484

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ON BRIEF

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Before KRASS, JERRY SMITH, and DIXON, Administrative Patent Judges.

JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1, 4 and 6-8. Claims 2, 3 and 5 have been indicated to contain allowable subject matter [answer, page 2].

The disclosed invention pertains to devices that position magnetic fields inside or outside of a ferromagnetic tube. The position of the magnetic field is determined by the length/diameter ratio of the tube and the position of conductor coils inside or outside of the tube.

Representative claim 1 is reproduced as follows:

1. A magnetic field device comprising:  
a ferromagnetic tube, with a length 7 or more times the diameter and with a conductor wound on the outside of said tube will produce a magnetic field inside of said tube when an electric current is introduced into said conductor.

The examiner relies on the following references:

Zwobada et al. (Zwobada)	3,638,150	Jan. 25, 1972
MacLennan	4,117,436	Sep. 26, 1978
Szabo	4,675,638	June 23, 1987

Claim 1 stands rejected under 35 U.S.C. § 102(b) as being anticipated by the disclosure of Zwobada. Claim 4 stands rejected under 35 U.S.C. § 102(b) as being anticipated by the disclosure of Szabo. Claims 6-8 stand rejected under 35 U.S.C. § 102(b) as being anticipated by the disclosure of MacLennan.

Rather than repeat the arguments of appellant or the examiner, we make reference to the brief and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the examiner and the evidence of anticipation relied upon by the examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the brief along with the examiner's rationale in support of the rejections and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon supports the rejection of claims 1, 4 and 6-8. Accordingly, we affirm.

Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); cert. dismissed, 468 U.S. 1228 (1984); W.L. Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

We consider first the rejection of claim 1 as fully met by the disclosure of Zwobada. The examiner indicates how he reads claim 1 on the disclosure of Zwobada [answer, page 3]. Appellant argues that there is no disclosure in Zwobada that the ferromagnetic tube has a length of 7 or more times the diameter as claimed. Appellant notes that Zwobada has nothing to do with the magnetic field behavior of tubes, and that the field in Zwobada is across the tube [brief, pages 3-4]. The examiner responds that Figure 1 of Zwobada shows a ferromagnetic tube 1 which has a length that is 7 times or more greater than its diameter [answer, page 5].

Although appellant is correct that Zwobada says nothing about the dimensions of the ferromagnetic tube, the examiner is also correct that the dimensions of the tube shown in Figure 1 appear to satisfy the relationship that the length of tube 1 is 7 or more times the diameter of tube 1. Although drawings may not always be drawn to scale, the fact that the tube is drawn with those dimensions is sufficient to shift the burden to appellant to explain why that figure cannot be viewed as being drawn to scale. That is, the drawings are presumed to be accurate, and that presumption is rebuttable by appellant. Appellant has provided no evidence that the tube in Zwobada is not drawn to

scale. With respect to the magnetic field, appellant argues that the magnetic field in Zwobada is across the tube. Since claim 1 only recites that a magnetic field is produced inside the tube, the field across the tube meets the claim recitation. There is no limitation on the direction of the field recited in claim 1. Therefore, we sustain the examiner's rejection of claim 1.

We now consider the rejection of claim 4 as fully met by the disclosure of Szabo. The examiner indicates how he reads claim 4 on the disclosure of Szabo [answer, pages 3-4]. Appellant argues that the multiple shell core of Szabo is not a tube, and that there is no indication that Szabo even considered tube length diameter ratios as claimed [brief, page 4]. The examiner responds that the ring-shaped wall 4 of Szabo constitutes a ferromagnetic tube as claimed [answer, page 5].

Although appellant is correct that Szabo says nothing about the dimensions of the ferromagnetic tube, the examiner is also correct that the dimensions of the tube shown in Figure 1 appear to satisfy the relationship that the tube 4 has a length which is one and one half or less times the diameter. As noted above, the fact that the tube is drawn with those dimensions is sufficient to shift the burden to appellant to explain why that figure cannot be viewed as being drawn to scale. Appellant has

provided no evidence that the tube in Szabo is not drawn to scale. We also agree with the examiner that the portion of Szabo which includes bottom 6 and wall 4 constitutes a ferromagnetic tube as claimed. Therefore, we sustain the examiner's rejection of claim 4.

We now consider the rejection of claims 6-8 as fully met by the disclosure of MacLennan. The examiner indicates how he reads claims 6-8 on the disclosure of MacLennan [answer, page 4]. Appellant argues that MacLennan does not express any knowledge of nor use tube diameter/length ratios [brief, page 4]. The examiner responds that Figure 1 of MacLennan shows a ferromagnetic tube 12 which has a length that is one and one half or less times the diameter of the tube [answer, pages 5-6].

Although appellant is correct that MacLennan says nothing about the dimensions of the ferromagnetic tube, the examiner is also correct that the dimensions of the tube shown in Figure 1 appear to satisfy the relationship that the length of tube 12 is one and one half or less times the diameter of tube 12. Again, the fact that the tube is drawn with those dimensions is sufficient to shift the burden to appellant to explain why that figure cannot be viewed as being drawn to scale. Appellant has provided no evidence that the tube in MacLennan is not drawn to

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scale. Therefore, we sustain the examiner's rejection of claim 6. Since appellant has not presented any additional arguments specifically directed to claims 7 and 8, we also sustain the examiner's rejection of claims 7 and 8.

In summary, we have sustained each of the examiner's rejections of the claims on appeal. Therefore, the decision of the examiner rejecting claims 1, 4 and 6-8 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED

ERROL A. KRASS  
Administrative Patent Judge

JERRY SMITH  
Administrative Patent Judge

JOSEPH L. DIXON  
Administrative Patent Judge

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